REMARKS

This paper is filed in response to the office action mailed on December 14, 2004.

The specification, abstract and drawings have been amended for purposes of clarity. Specifically, Fig. 4 has been amended to show the distinct well regions 14b/16a/14a as originally shown but labeled differently in Fig. 4 as filed. Support for the amendments to Fig. 4 and to the specification are supported by the specification as filed, specifically paragraph 0021 which describes the "three-fold" well region of Fig. 4 which is shown as layers 14/16/14 in original Fig. 4 as filed. Therefore, no new matter is added by the clarifying amendments to Fig. 4 and the specification. The abstract has also been amended for clarification purposes.

Claims 1-6 have been amended; claims 1-6 remain pending. Claims 1 and 5 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 6,297,098 ("Lin"); claim 3 stands rejected under 35 U.S.C. § 103 as being unpatentable over Lin in view of U.S. Patent No. 6,198,142 ("Chau"); and claim 6 stands rejected under 35 U.S.C. § 103(b) as being unpatentable over Lin in view of U.S. Patent No. 6,720,631 ("Brigham"). In response, claim 1 has been amended to traverse these rejections.

Specifically, the rejection of claims 1 and 5 as allegedly being anticipated by Lin is improper because, under MPEP § 2131,

> [t]o anticipate a claim, the reference must teach every element of the claim. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Citing, Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

While Lin teaches a first implant using phosphorous and a second implant using arsenic, Lin fails entirely to teach a three-part or three-fold well region wherein the lighter ions have migrated to the upper and lower layers and wherein the heavier ions have migrated to a middle layer. Lin only teaches the lighter phosphorous ions in the lower layer 117 and the heavier arsenic ions in the upper layer 119. Lin teaches nothing about any way to get the lighter phosphorous ions to migrate to a layer or region disposed on top of the region 119 that includes the heavier arsenic ions. Therefore, Lin in no way teaches or suggests forming a three-part or three-fold well region wherein the upper and lower regions

are implanted with the first lighter ions and the middle well region is implanted with the heavier second ions as recited in amended claim 1. Therefore, Lin cannot possibly serve as an anticipating reference for amended claim 1 or dependent claim 5 and therefore the anticipation rejection is improper and should be withdrawn.

Similarly, the obviousness rejection of claims 3 and 6 is improper because, under MPEP §§ 2142 and 2143,

> [t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

Citing, In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); *see also* MPEP § 2143-§ 2143.03 for decisions pertinent to each of these criteria.

As established above, Lin fails entirely to teach or suggest the use of an annealing process to form a three region well wherein the upper and lower well regions include the lighter dopant and a middle region includes the heavier dopant as recited in independent claim 1. Chau, on the other hand, is merely cited for the proposition that it teaches a RTP process that uses a hydrogen or a nitrogen gas atmosphere. Chau in no way teaches or suggests the formation of a three region well region including the upper and lower and middle layers as recited in amended claim 1. Thus, no hypothetical combination of Lin and Chau teaches or suggests every element of amended claim 1 and therefore the obviousness rejection of claim 3 is improper and should be withdrawn.

Finally, the obviousness rejection of claim 6 is improper as Brigham is merely cited for the proposition that it teaches the use of a screen oxide layer. Brigham fails entirely to teach or suggest the three region well region recited in amended claim 1 and therefore no hypothetical combination of Brigham and Lin teaches or suggests every element of amended claim 1 and therefore the obviousness rejection of claim 6 is improper and should be withdrawn.

With all rejections having been traversed, applicant respectfully submits that this application is in a condition for allowance and an early action so indicating is respectfully requested.

The Commissioner is authorized to charge any fee deficiency required by this paper, or credit any overpayment, to Deposit Account No. 13-2855.

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Respectfully submitted,

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